

IN THE ABSTRACT

Please delete the current Abstract in its entirety and
substitute therefore the following New Abstract:

NEW ABSTRACT

Magnetic particles are introduced into at least part of a target area of an object under examination. A target area having a first part that has a first magnetic field strength that keeps magnetic particles in a non-saturated state, and a second part that has a second magnetic field strength that keeps the magnetic particles in a saturated state. A superposed oscillating or rotating magnetic field is generated at least partially in the first part-area to cause at least some magnetic particles to oscillate or rotate. The target area is irradiated with electromagnetic radiation and detected radiation includes reflected or scattered electromagnetic radiation, which is modulated by interaction with rotating or oscillating magnetic particles in the target area. The intensity, absorption or polarization of the detected electromagnetic radiation is determined as a function of change in rotation or oscillation of the magnetic particles due to modulation.